Concepts of Severe Weather/Storm Spotting

Milwaukee/Sullivan web site address: www.crh.noaa.gov/mkx or www.weather.gov/milwaukee
Rusty's email address: rusty.kapela@noaa.gov
Information about Storm Spotting can be found on the SkyWarn Page on the Milwaukee/Sullivan web site – link is in blue column to the left of the southern Wisconsin base map.
Wisconsin Emergency Management homepage: www.emergencymanagement.wi.gov

Register in e-Spotter, an online program found on SkyWarn Page, after you have completed a 2-hr spotter class.
Basic and advanced storm spotter slide sets (Part I and II) can be found on SkyWarn Page.
Wisconsin severe weather graphics and bean counts: www.crh.noaa.gov/mkx/climate-severe.php
National severe weather hazard statistics: www.nws.noaa.gov/om/hazstats.shtml
Preparedness and Safety Tips: http://www.crh.noaa.gov/mkx/edu.php

Storm Prediction Center's web site address: www.spc.noaa.gov
All about tornadoes: www.spc.noaa.gov/faq/tornado
All about derechos: www.spc.noaa.gov/misc/AbtDerechos/derechofacts.htm
All about the new enhanced Fujita Scale: http://www.spc.noaa.gov/efscale/

University of Wisconsin - Madison satellite study page: http://cimss.ssec.wisc.edu/
University of Wisconsin – Milwaukee model page: http://sanders.math.uwm.edu/~realtime/rt_home.html

Glossary for storm spotters: www.srh.noaa.gov/oun/severewx/glossary.php
Sullivan Committee (oversees ham activities and receipt of ham reports at MKX) - http://www.sulcom.info
MidWest Severe Storm Tracking/Response Center – http://www.midwestsstrc.org
Milwaukee Area Skywarn Association - http://www.mke-skywarn.org/

Brochures and publications (including spotter guides) can be found at these addresses:
www.nws.noaa.gov/om/brochures.shtml
www.2010.atmos.uiuc.edu/(Gh)/guides/mtr/svr/xtml (Some advanced ideas)
www.cimms.ou.edu/~doswell/microbursts/Handout.html (Microburst Info)

Using a search engine…type in the following "key" words to find additional web sites (You tube for videos):
Skywarn tornado thunderstorm downburst tornadoproject storm chaser vortex derecho severe weather Enhanced Fujita scale rotating wall cloud shelf cloud rear flank downdraft safe room

Link to other NWS sites: www.weather.gov/organization.php You are encouraged to surf other NWS office web sites and check out their storm spotter pages, or something on that order…you'll find some interesting things.

Citizen's Weather Observing Program: www.wxga.com
http://216.39.128.10/~aprswest/javAPRS/wx.html
Educational Outreach: www.nws.noaa.gov/om/

Engineering and Design Considerations for Strengthening Structure: www.wind.ttu.edu

Historical & Past weather information:
National Climatic Data Center – Ashville, NC – www.ncdc.noaa.gov
Midwestern Climatic Center – http://mcc.swsuiuc.edu
Wisconsin State Climatology Office: www.aos.wisc.edu/~sco
Wisconsin Storm Write-ups: http://www.crh.noaa.gov/mkx/?n=documented_storms

Lightning Safety Tips - http://www.lightningsafety.noaa.gov/outdoors.htm
http://lightningsafety.noaa.gov http://www.mos.org/sln/toe/cage.html
http://www.struckbylightning.org/news/dispIncidentdb.cfm
CoCoRaHS – www.cocorahs.org contact rusty.kapela@noaa.gov

Reportable Weather Conditions - Severe Weather Spotters

Severe Conditions – Highest Priority – radio/call NWS office, or call 911

1. Tornado (Waterspout for Lake Michigan. Still a "tornado" if on an inland lake)
2. Funnel Cloud
3. Rotating Wall Cloud

For #1 and #2 and # 3 above - include the general direction that spotter is looking using the 16-point compass format (North-Northeast, South-Southwest, etc.) in addition to the spotter's location. **Don't** estimate distance from you to a tornado, funnel cloud, or rotating wall cloud! – Sullivan NWS office **doesn't** need that info!

4. Severe Damage
   - tree branches greater than 3" dia. snapped, trees uprooted
   - any structural damage to buildings (includes roof damage)
   - bent, snapped or collapsed light poles or traffic lights, or downed power lines
   - crop damage, cave-ins, and mud slides and debris flows and sink holes
5. Severe Winds
   - 58 mph or higher (indicate if measured, estimated, or implied by Severe Damage)
6. Severe Hail
   - 1 inch or greater in diameter (indicate if hail size is measured or estimated)
7. Severe Flooding
   - water over river banks or dams, or water out of banks that causes property damage
   - roads, bridges, or railroads washed out, or impassable or closed roads

Sub-severe Conditions – Lower Priority, Use e-Spotter or call the NWS office

8. Minor Hail
   - 3/4 inch to 7/8 inch in diameter (indicate if hail size is measured or estimated)
9. Minor Damage
   - any cosmetic damage to buildings & vehicles
   - tree branches less than 3" dia. snapped causing power line damage or cosmetic damage to buildings & vehicles
10. Minor Flooding
    - non-life-threatening / non-damaging water over curb, or water on roads
    - water out of banks but confined to low lands and bottom lands (not impacting buildings)
11. Visibility
    - less than 1/2 mile (indicate if due to precipitation, fog, blowing dirt or snow, or smoke)
12. Rainfall
    - measured amounts equal to or exceeding the rate of 1/4" per 15 minutes measured over at least 15 minutes (i. e., a measured rate greater than 1" per hour). **If possible**, indicate the start time and the end time of the measurement period (i. e., "measured between 11:05am and 11:25am")
13. Minor Winds
    - 40 mph to 57 mph (indicate if speed is measured or estimated)
    - anything less than 40 mph should not be reported unless asked to do so by Sullivan NWS Office

Miscellaneous – Snowfall measurements are needed. Use e-Spotter. Time period between measurements of new snow must be at least 6 hours, but no longer than 24 hrs. Use of a white snow board is recommended. Measure snow in an area that experiences minimal drifting. Need new snow, total snow on ground, storm total.

All Reports shall include spotter location and time of event. Questions – contact rusty.kapela@noaa.gov
Spotter Location – distance (to 1/10 mile)/bearing to the cultural/political center of a city 1.7 ENE Dousman, or in GPS coordinates, lat/long in decimal format to at least the 3rd decimal place.